

REMARKS

Claims 1-6, 12-14, and 17-19 are pending in this application, with Claims 1, 7, 12, 15, 17 and 20 being independent.

Claims 1-6, 12-14, and 17-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US 6,118,887 to Cosatto et al. (Cosatto) in view of the article “Spatiotemporal Analysis of Face Profiles: detection, segmentation and registration” by Daruish et al. (Daruish).

As recited in independent Claim 1, the present invention includes, *inter alia*, the feature of spatiotemporally segmenting a video sequence to provide a sequence of associated two-dimensional segments, a first two-dimensional segment in the sequence of associated two-dimensional segments including facial features for tracking.

Applicant submits that the cited art, whether considered individually or in combination, fails to disclose or suggest at least the above-mentioned features of Claim 1. The Office Action asserts that, in paragraph 1.3, Daruish discloses “spatiotemporally segmenting video sequence to provide a sequence of associated two-dimensional segments.” With respect, Applicant submits that paragraph 1.3 of Daruish is essentially a summary of the approach described in that document. However, as better explained in paragraph 2, the technique of Daruish extracts, from each image in the sequence, independently of others, a contour. It would appear that this “contour” is what the Examiner is apparently equating to the presently claimed “two-dimensional segment”. However, a contour is a line, and is essentially one-dimensional. The two-dimensional segments of the present invention recited in Claim 1 are regions of pixels in each frame of the sequence.

Daruish describes that the extracted contour is then segmented, or partitioned, into different domains (see paragraph 4) taking into account spatiotemporal knowledge (see paragraphs 1.3 and 4). In other words, the spatiotemporal processing of that document does not take place until after the contours (or “segments”) have been extracted. In contrast, step (b) of Claim 1 of the present application (for example) clearly defines spatiotemporally segmenting the video sequence to provide a sequence of associated two-dimensional segments. Clearly, the spatiotemporally segmenting occurs on the video sequence and the two-dimensional segments are a consequence of the spatiotemporal segmenting. By contrast, in Daruish, it appears as

though the images are segmented and then spatiotemporal analysis is performed on the segments. The segments are therefore not necessarily spatiotemporal segments, as claimed.

Further, Applicant submits that Cosatto, by teaching independent processing of each frame, teaches away from the spatiotemporal techniques of Daruish, and of the present invention, and therefore it would not have been obvious to combine the teachings of those documents.

For the foregoing reasons, Applicant submits that the present invention recited in Claim 1 is patentable over the cited art. The other independent claims recite features similar to those of Claim 1 discussed above and are believed patentable for reasons similar to Claim 1.

The dependent claims are patentable for at least the same reasons as the independent claims, as well as for the additional features they recite.

In view of the foregoing, Applicant submits that this application is in condition for allowance. Favorable reconsideration and an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Attorney for Applicant
Brian L. Klock
Registration No. 36,570

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
BLK/lcw

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